

I claim:

1. A carbonator, comprising:
an oblong shaped housing;
a liquid inlet port disposed on the housing for inletting a liquid from a liquid source;
a gas inlet port disposed on the housing for inletting gas from a gas source; and
an exit port disposed on the housing.
2. The carbonator according to claim 1, wherein the oblong shaped housing creates an increased gas/liquid interaction area for absorption by the liquid.
3. The carbonator according to claim 1, wherein the gas is carbon dioxide.
4. The carbonator according to claim 1, wherein the liquid is water.
5. The carbonator according to claim 2, wherein the mixture exiting the carbonator is carbonated water.
6. The carbonator according to claim 1, wherein the housing comprises an oblong shell and two ends.
7. The carbonator according to claim 6, wherein the oblong shell provides an increased exterior surface area, thereby increasing the heat removal capability.
8. The carbonator according to claim 6, wherein the oblong shell provides a reduced vertical height component, thereby decreasing the surrounding cold plate thickness requirement.
9. The carbonator according to claim 1, wherein the liquid and gas mixture is removed through the exit port.

10. A carbonator, comprising:
- a housing;
 - a film generator assembly disposed in the housing;
 - a gas inlet port disposed on the housing, the gas inlet port coupled with a gas source for communicating gas into the housing;
 - a liquid inlet port disposed on the housing, the liquid inlet port coupled with a liquid source for communicating liquid to the film generator assembly, wherein the film generator assembly forces the liquid into a film to maximize the liquid/gas interaction area; and
 - an outlet port disposed on the housing for delivery of a liquid/gas mixture exterior to the housing.
11. The carbonator according to claim 10, wherein the gas is carbon dioxide.
12. The carbonator according to claim 10, wherein the liquid is water.
13. The carbonator according to claim 10, wherein the mixture exiting the carbonator is carbonated water.
14. The carbonator according to claim 10, wherein the film generator assembly includes a cylindrical film generator.
15. The carbonator according to claim 14, wherein the cylindrical film generator includes a plurality of apertures to aid the liquid in taking the shape of a film.
16. The carbonator according to claim 10, wherein the film generator assembly includes a hemispherical redirector to change the direction of the water inlet into the film generator assembly.

17. The carbonator according to claim 16, wherein the hemispherical redirector is disposed on an end of the cylindrical film generator to redirect the incoming liquid stream towards the cylindrical film generator.
18. A method of increasing the surface area of a liquid for mixing with a gas, comprising:
 - a. spraying the liquid into a film generator assembly disposed in a chamber filled with a pressurized gas;
 - b. generating a film as the liquid moves over a film generator.
19. The method according to claim 18, further comprising:
 - c. absorbing the higher pressure gas into an increased exposed surface area of the liquid.
20. The method according to claim 18, wherein the spray is redirected toward the film generator.
21. The method according to claim 18, wherein the film generator includes apertures to promote the generation of a liquid film.
22. The method of claim 20, wherein the liquid is redirected using a hemispherical redirector.
23. The method of claim 18, wherein the film generator is cylindrical.
24. The method of claim 18, wherein the liquid is water.
25. The method of claim 18, wherein the gas is carbon dioxide.

26. A method of increasing the surface area of a liquid for mixing with a gas, comprising:
- a. spraying a liquid onto a film generator;
 - b. increasing the exposed surface area of the liquid by forcing the liquid to move down the film generator; and
 - c. absorbing ambient gas into the liquid through the exposed surface area.
27. The method according to claim 26, wherein the spray is redirected toward the film generator.
28. The method according to claim 26, wherein the film generator includes apertures to promote the generation of a liquid film.
29. The method of claim 27, wherein the liquid is redirected using a hemispherical redirector.
30. The method of claim 26, wherein the film generator is cylindrical.
31. The method of claim 26, wherein the liquid is water.
32. The method of claim 26, wherein the gas is carbon dioxide.